

CLAIMS

1. A method for manufacturing a synthetic resin coated metal can body by drawing a metal sheet coated on both surfaces with a thermoplastic resin to obtain a cup body and then ironing a side wall of the cup body by using a punch and a plurality of ironing dies,

wherein the ironing comprises a first ironing conducted with respect to the side wall of the cup body with a first ironing die at a processing quantity such that a sheet thickness reduction ratio from an original sheet thickness is within a range of 35 to 55% and a second ironing conducted with a second ironing die with respect to the side wall, which has been subjected to the first ironing, at a processing quantity such that a sheet thickness reduction ratio from the original sheet thickness is within a range of 60 to 75%.

2. The method for manufacturing a synthetic resin coated metal can body according to claim 1, wherein the first ironing die and the second ironing die are single ironing dies.

3. The method for manufacturing a synthetic resin coated metal can body according to claim 1, wherein at least the first ironing die from among the first ironing die and the second ironing die is a composite ironing die comprising a leading side ironing die and a trailing side ironing die arranged in a row in an ironing direction.

4. The method for manufacturing a synthetic resin coated metal can body according to claim 3, wherein the ironing of the side wall performed with the leading side ironing die is conducted at a processing quantity such that a sheet thickness reduction ratio from the original sheet thickness is within a range of 18 to 40%, and the ironing of the side wall performed with the trailing side ironing die is conducted at a processing quantity such that a sheet thickness reduction ratio from the original sheet thickness is within a range of 35 to 55%.

5. The method for manufacturing a synthetic resin coated metal can body according to any one of claims 1 to 4, wherein the metal sheet is an aluminum sheet.

6. The method for manufacturing a synthetic resin coated metal can body according to any one of claims 1 to 4, wherein the thermoplastic resin has a tensile modulus of elasticity of 1.45 to 11.8 GPa.

7. The method for manufacturing a synthetic resin coated metal can body according to claim 6, wherein the thermoplastic resin is a polyester resin.

8. The method for manufacturing a synthetic resin coated metal can body according to any one of claims 1 to 4, wherein the thermoplastic resin is coated on the metal sheet to a thickness of 5 to 50  $\mu\text{m}$  on the side that is to be an inner surface side of

the metal can body and to a thickness of 3 to 50  $\mu\text{m}$  on the side that is to be an outer surface of the metal can body.

9. A device for manufacturing a synthetic resin coated metal can body by using a punch and a plurality of ironing dies and ironing a side wall of a cup body obtained by drawing a metal sheet coated on both surfaces with a thermoplastic resin,

wherein the plurality of ironing dies comprise a first ironing die for conducting first ironing at a processing quantity such that a sheet thickness reduction ratio from an original sheet thickness is within a range of 35 to 55% and a second ironing die disposed at a distance equal to or slightly larger than the length of the metal can body obtained in the first ironing from the first ironing die and conducting second ironing with respect to the side wall, that has been subjected to the first ironing, at a processing quantity such that a sheet thickness reduction ratio from the original sheet thickness is within a range of 60 to 75%.

10. The device for manufacturing a synthetic resin coated metal can body according to claim 9, wherein the first ironing die and the second ironing die are single ironing dies.

11. The device for manufacturing a synthetic resin coated metal can body according to claim 9, wherein at least the first ironing die from among the first ironing die and the second ironing die is a composite ironing die comprising a leading side

ironing die and a trailing side ironing die arranged in a row in an ironing direction.

12. The device for manufacturing a synthetic resin coated metal can body according to claim 11, wherein the ironing of the side wall performed with the leading side ironing die is conducted at a processing quantity such that a sheet thickness reduction ratio from the original sheet thickness is within a range of 18 to 40%, and the ironing of the side wall performed with the trailing side ironing die is conducted at a processing quantity such that the sheet thickness reduction ratio from the original sheet thickness is within a range of 35 to 55%.

13. The device for manufacturing a synthetic resin coated metal can body according to any one of claims 9 to 12, wherein the metal sheet is an aluminum sheet.

14. The device for manufacturing a synthetic resin coated metal can body according to any one of claims 9 to 12, wherein the thermoplastic resin has a tensile modulus of elasticity of 1.45 to 11.8 GPa.

15. The device for manufacturing a synthetic resin coated metal can body according to claim 14, wherein the thermoplastic resin is a polyester resin.

16. The device for manufacturing a synthetic resin coated metal can body according to any one of claims 9 to 12, wherein the thermoplastic resin is coated on the metal sheet to a

thickness of 5-50  $\mu\text{m}$  on the side that is to be an inner surface side of the metal can body and to a thickness of 3-50  $\mu\text{m}$  on the side that is to be an outer surface of the metal can body.